



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/687,319

10/16/2003

Jin Wang

LAHA 9-2-11

8497

50525 7590 05/29/2008
DUFT BORNSSEN & FISHMAN, LLP
1526 SPRUCE STREET
SUITE 302
BOULDER, CO 80302

EXAMINER

DAVENPORT, MON CHERI S

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

05/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/687,319	Applicant(s) WANG ET AL.	
	Examiner MON CHERI S. DAVENPORT	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/1/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims **1-5, 7-11, and 14-18** rejected under 35 U.S.C. 102(b) as being anticipated by Sigler et al. (US Patent Number 5,717,830).

Regarding **claim 1** Sigler et al discloses a wireless communication network configured to provide low latency services to mobile wireless devices, the wireless communication network comprising (see fig. 4, col. 7, lines 39-47, integrated mobile telephone that can be used to transmit and receive in a Closed User Group (CUG) arrangement that allows each member of the group to hear what any other user is saying, permit each member of the group to talk when needed (low latency)):

a transport network comprising: a signaling network configured to transport call signaling (see fig. 4, out of band signaling); and

a bearer network configured to transport bearer traffic (see fig. 4, communication channels),

wherein a special connection on the bearer network is established and at least a portion of the capacity of the special connection is reserved for transporting call signaling (see fig. 4, section interstation signaling channels, see col. 4, lines 42-46, interstation signaling(in-band signaling) , is provided on established communication channels for supervisory and activation purposes, this reads on a reserved special connection on the bearer network, in-band signaling);

a base station system connected to the transport network, the base station system 9 fig 4, NCC, Network Communication controller), responsive to receiving call signaling from a mobile wireless device, determines if the call signaling is for a low latency service (see col. 16-17, lines 61-6, A mobile user requests a channel on a PTT basis, Since the base FES retransmits the signal received from the mobile, the MET operates in a half duplex PTT mode, turning off the speaker while the microphone is engaged. When the user releases the PTT, the MET ceases transmission. On receipt of a release message from the base FES, the MET retunes to the signaling channel, see fig 28, shows the in-band signaling mode during PTT signaling, this systems determines and know the difference between a low latency service, and a when low latency service is not required), forwards the call signaling over the special connection on the bearer network if the call signaling is for a low latency service, and forwards the call signaling over the signaling network if the call signaling is not for a low latency service (see col. 19, lines 33-36, and

Art Unit: 2616

col. 19, lines 41-46, NRCR.sub.-- SU shall be used to broadcast the NET ID to the METs during a Net Radio call and to indicate to the METs that the channel assignment for the Net Radio call is about to be released, see fig 28, call signaling uses out-band signaling, PTT_SU is used to request access to inbound signaling (special connection) for the PTT service(low latency)) ; and

a switching system connected to the transport network (fig. 4, FES), the switching system, responsive to receiving the call signaling over the special connection on the bearer network or the signaling network, forwards the call signaling over a packet data network (see col. 17, lines 1-6, met operates in half duplex PTT, see fig 28, in-band signaling PTT, see fig 36, response in-band signaling PTT signal).

Regarding **Claims 2, 8, and 15** Sigler et al. discloses everything as applied above (*see claims 1, 7, and 14*). In addition the wireless communication network and method includes:

the switching system, responsive to receiving call signaling from the packet data network, determines if the call signaling is for a low latency service, forwards the call signaling over the special connection on the bearer network if the call signaling is for a low latency service(see fig. 36, in-band signaling, PTT signal sent when received) and forwards the call signaling over the signaling network if the call signaling is not for a low latency service (see fig 36, all other signal is sent in out-band signal channel, See Gc-S).

Regarding **Claims 3, 9, and 16** Sigler et al. discloses everything as applied above (*see claims 1, 7, and 14*). In addition the wireless communication network and method includes:

wherein the low latency service comprises a Push to Call (PTT, Push to talk) service (see col. 17, lines 13-14, The user then activates the PTT button) .

Regarding **Claims 4, 10, and 17** Sigler et al. discloses everything as applied above (*see claims 1, 7, and 14*). In addition the wireless communication network and method includes:

wherein the special connection also transports bearer traffic in addition to call signaling (see col 19, lines 60-65, PTT.sub.-- SU request on the communications channel followed by the transmission of voice frames, see also fig 28, voice mode traffic) .

Regarding **Claim 5, 11, and 18** Sigler et al. discloses everything as applied above (*see claims 4, 10, and 17*). In addition the wireless communication network and method includes:

a control system that controls the amount of bearer traffic allowed on the special connection to help ensure latency on the special connection (see col. 20-21, lines 66-8, Net Management System (NMS) permits a Net Radio subscribing organization to customize their communication nets by assigning NET IDs to METs, changing NET ID assignments, or modifying the user defined attributes of a NET ID assigned to a MET. These changes are made by contacting or interfacing with customer billing support

Art Unit: 2616

system/personnel. The NMS enters the changes in the NOC customer configuration database. The NOC disseminates this information to the NCC, which downloads the changes to the MET "over the air" from the GC-S channel, controlling the bearer traffic).

Regarding **claim 7 and 14** Sigler et al. discloses a method of operating a wireless communication network configured to provide low latency services to mobile wireless devices, the wireless communication network comprising a transport network, a base station system, and a switching system, the transport network comprising a signaling network configured to transport call signaling and a bearer network configured to transport bearer traffic, the method comprising the steps of(see fig 3 and fig 4):

establishing a special connection on the bearer network(fig 28, in-band signal PTT-SU);

reserving at least a portion of the capacity on the special connection for transporting call signaling (fig, 28, in-band signaling mode) ;

in response to receiving call signaling in the base station system from a mobile wireless device (see fig., 28, request from PTT),

determining if the call signaling received by the base station system is for a low latency service (see fig. 28, PTT signal is sent using in-band signaling mode col. 19, lines 41-46, PTT_SU is used to request access to inbound signaling (special connection) for the PTT service(low latency)),

forwarding the call signaling over the special connection on the bearer network if the call signaling is for a low latency service (see fig 28, PTT_SU sent , in-band signaling mode), and

forwarding the call signaling over the signaling network if the call signaling is not for a low latency service (see fig . 28, request and channel assignment all takes place in the GC_S channel, out-band signal channel) ; and

in response to receiving the call signaling in the switching system over the special connection or the signaling network, forwarding the call signaling over a packet data network(see fig 36, receives a PPT_SU in-band signal, NR_SU call signaling is transmitted using special in-band signaling mode).

Claim Rejections - 35 USC § 103

Claims **6, 12-13, and 19-20** rejected under 35 U.S.C. 103(a) as being unpatentable over Sigler et al. in view of Cleveland et al. (US Patent Application Publication 2002/0118665).

Regarding **Claim 6, 12-13, and 19-20** Sigler et al. in view of Cleveland et al. discloses everything as applied above (*see claims 1, 7 and 14*).

However Sigler et al. fails to disclose the special connection comprises a T-1 line; and the portion of the capacity of the special connection reserved for transporting call

Art Unit: 2616

signaling comprises at least a fractional of a DS0; or the special connection comprises a fiber facility; and the portion of the capacity of the special connection reserved for transporting call signaling comprises at least a fractional of the bandwidth of the fiber facility as claimed.

Cleveland et al. disclose the special connection comprises a T-1 line (see paragraph [0030], lines 1-8, the BTS with the BSC communication link of voice and data signals(special connection) using means of T1 line); and

the portion of the capacity of the special connection reserved for transporting call signaling comprises at least a fractional of a DS0 (see paragraph [0030], lines 1-8, the BTS with the BSC communication link of voice and data signals (special connection) using means of T1 line, portion of T1 line is fractional of a DS0, part voice part data signals); and

; or

the special connection comprises a fiber facility(see paragraph [0030], line 7-8, fiber optic link); and

the portion of the capacity of the special connection reserved for transporting call signaling comprises at least a fractional of the bandwidth of the fiber facility (see paragraph [0030], line 1-8, fiber optic link, part voice part data signals).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Sigler et al. invention with T1 fiber line because Cleveland et al. system is used reduce the need for increased power from a MS (see Cleveland et al., see paragraph [0003], lines 2-3).

Response to Arguments

2. Applicant's arguments filed February 1, 2008 have been fully considered but they are not persuasive.

In the remarks on pg. 9 of the amendment, the applicant contends that Sigler et al. does not teach or suggest “a special connection on the bearer network is established and at least a portion of the capacity of the special connection is reserved for transporting call signaling”

Examiner respectfully disagrees Sigler teaches interstation signaling which is in-band signaling which is provided on established communication channels for

Art Unit: 2616

supervisory and activation purposes, this reads on a reserved special connection on the bearer network.

In the remarks on pg. 10 of the amendment, the applicant contends that Sigler et al. does not teach or suggest “determines if the call signaling is for a low latency service, forwards the call signaling over the special connection on the bearer network if the call signaling is for low latency service, and forwards the call signaling over the signaling network if the call signaling is not for a low latency service”

Examiner respectfully disagrees Sigler teaches a system that determines that a PTT service is being requested, and then a PTT_SU is used to request to the inbound signaling channel(reads on special connection) , otherwise out of band signaling is used as shown in fig. 28.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2616

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MON CHERI S. DAVENPORT whose telephone number is (571)270-1803. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art
Unit 2616

/Mon Cheri S Davenport/
Examiner, Art Unit 2616
May 22, 2008

Art Unit: 2616